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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,802	09/04/2003	Erik Scher	40-001320US	7085
22798	7590	04/26/2004	EXAMINER	
QUINE INTELLECTUAL PROPERTY LAW GROUP, P.C. P O BOX 458 ALAMEDA, CA 94501			DIAMOND, ALAN D	
			ART UNIT	PAPER NUMBER
			1753	

DATE MAILED: 04/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/656,802

Applicant(s)

SCHER ET AL.

Examiner

Alan Diamond

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-165 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-165 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |  |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-93, drawn to a photovoltaic device, classified in class 136, subclass 252.
  - II. Claims 94-111, drawn to a composition and film formed therefrom, classified in class 252, subclass 62.3R.
  - III. Claims 112-127, drawn to a method of producing a photovoltaic device, classified in class 438, subclass 93.
  - IV. Claims 128-141, drawn to a method of producing a layered device, classified in class 427, subclass 180.
  - V. Claims 142-145 and 147-155, drawn to a system for fabricating a photovoltaic device, classified in class 438, subclass 62.
  - VI. Claims 146 and 156-165, drawn to a system for fabricating a layered device, classified in class 118, subclass 200.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because, for example, the compositions of claims 1 and 47 do not require a second population of nanostructures; and the

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composition of claim 94 does not require a type II band offset energy profile as in claims 1 and 47. The subcombination has separate utility such as a semiconductor for a light emitting diode, resistor, or a thermoelectric device.

3. Inventions III and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the process as claimed can be used to make other and materially different product, such as a light emitting diode, a transistor, or a thermoelectric device.

4. The photovoltaic device of Group I is distinct from the method of producing a layered device in Group IV, the system for fabricating a photovoltaic device in Group V, and the system for fabricating a layered device in Group VI because a reference anticipating or rendering obvious the method of producing a layered device, the system for fabricating a photovoltaic device, or the system for fabricating a layered device cannot necessarily be used to anticipate or render obvious the photovoltaic device. Likewise, a reference anticipating or rendering obvious the photovoltaic device cannot necessarily be used to anticipate or render obvious the method of producing a layered device, the system for fabricating a photovoltaic device, or the system for fabricating a layered device.

5. The composition and film formed therefrom of Group II is distinct from the method of producing a photovoltaic device in Group III, the method of producing a

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layered device in Group IV, the system for fabricating a photovoltaic device in Group V, and the system for fabricating a layered device in Group VI because a reference anticipating or rendering obvious the method or producing a photovoltaic device, the method of producing a layered device, the system for fabricating a photovoltaic device, or the system for fabricating a layered device cannot necessarily be used to anticipate or render obvious the composition and film formed therefrom. Likewise, a reference anticipating or rendering obvious the composition and film formed therefrom cannot necessarily be used to anticipate or render obvious the method of producing a photovoltaic device, the method of producing a layered device, the system for fabricating a photovoltaic device, or the system for fabricating a layered device.

6. The method of producing a photovoltaic device in Group III is distinct from the method of producing a layered device in Group IV, the system for fabricating a photovoltaic device in Group V, and the system for fabricating a layered device in Group VI because a reference anticipating or rendering obvious the method of producing a layered device, the system for fabricating a photovoltaic device, or the system for fabricating a layered device cannot necessarily be used to anticipate or render obvious the method of producing a photovoltaic device. Likewise, a reference anticipating or rendering obvious the method of producing a photovoltaic device cannot necessarily be used to anticipate or render obvious the method of producing a layered device, the system for fabricating a photovoltaic device, or the system for fabricating a layered device.

7. The method of producing a layered device in Group IV is distinct from the system for fabricating a photovoltaic device in Group V and the system for fabricating a layered device in Group VI because a reference anticipating or rendering obvious the system for fabricating a photovoltaic device or the system for fabricating a layered device cannot necessarily be used to anticipate or render obvious the method of producing a layered device. Likewise, a reference anticipating or rendering obvious the method of producing a layered device cannot necessarily be used to anticipate or render obvious the system for fabricating a photovoltaic device or the system for fabricating a layered device.

8. The system for fabricating a photovoltaic device in Group V is distinct from the system for fabricating a layered device in Group VI because a reference anticipating or rendering obvious the system for fabricating a layered device cannot necessarily be used to anticipate or render obvious the system for fabricating a photovoltaic device. Likewise, a reference anticipating or rendering obvious the system for fabricating a photovoltaic device cannot necessarily be used to anticipate or render obvious the system for fabricating a layered device.

9. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

10. Because these inventions are distinct for the reasons given above and the search required for any one of the groups is not required for any of the other groups, restriction for examination purposes as indicated is proper.

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11. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

12. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

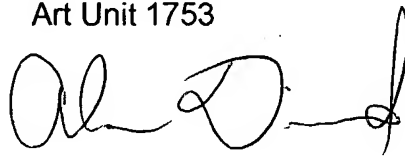
13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan Diamond whose telephone number is 571-272-1338. The examiner can normally be reached on Monday through Friday, 5:30 a.m. to 2:00 p.m. ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on 571-272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Alan Diamond  
April 23, 2004

Alan Diamond  
Primary Examiner  
Art Unit 1753

A handwritten signature in black ink, appearing to read 'Alan Diamond', with a stylized flourish at the end.